

## ABSTRACT OF THE DISCLOSURE

A catheter for intravascular corporeal cooling comprises an elongated tubular member having at least one lumen extending therethrough for providing cooled blood, an inflatable annular  
5 balloon positioned on the outer surface of the elongated tubular member, and a pressure reliever positioned in the external wall of the elongated tubular member and proximal to the annular inflatable balloon, wherein when the pressure of blood within a lumen reaches a predetermined value, the pressure reliever opens  
10 to permit fluid to be released from the elongated tubular member. In other embodiments of the invention the catheter may have two or more inflatable annular balloons that are separately inflatable and/or the catheter has an insulative outer annular member.